44th YEAR OF PUBLICATION

SCHOOL AND SOCIETY

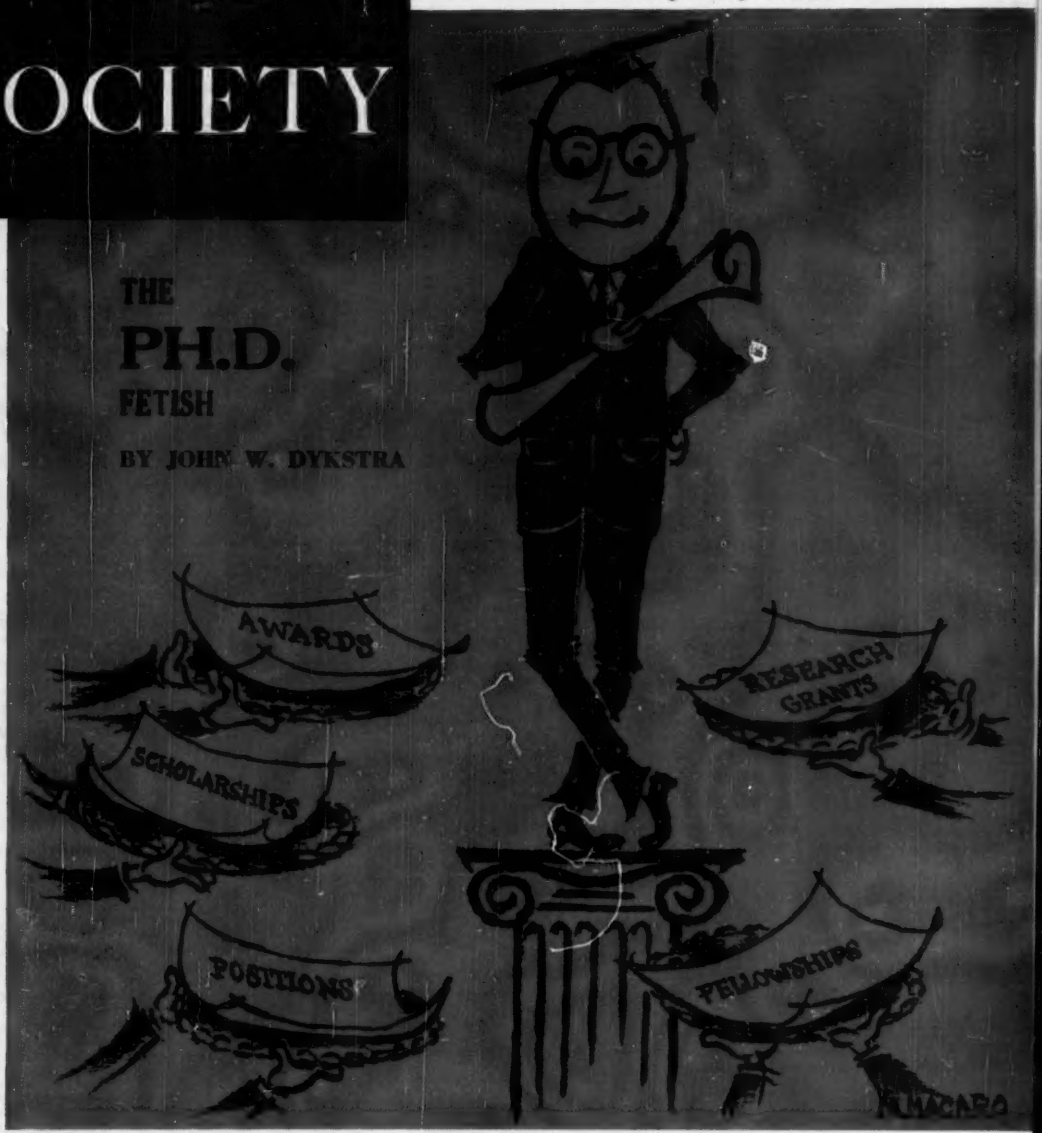
FEDERAL SUPPORT, NOT FEDERAL AID: THE MURRAY-METCALF BILL

By J. L. McCASKILL

OBJECTIVES IN ELEMENTARY SCIENCE

A Preview of a Forthcoming Book

May 24, 1958



Educational Ticker Tape

If additional, detailed information is desired concerning news items in this column, write to SCHOOL AND SOCIETY'S Information Service, enclosing 50 cents for each item requested.

U. S. TREASURY RULING MAY SAVE TEACHERS ABOUT $20,000,000 A YEAR

The recent U. S. Treasury Department ruling may put back into the pockets of American teachers as much as $20,000,000 every year and raise the quality of teachers, according to William G. Carr, executive secretary, National Education Association. He called the new ruling "the most significant step ever taken by the United States government to improve the economic status of teachers and their professional qualifications."

U. S. Treasury regulation TD 6291 liberalized the deductability of educational expenses of teachers from income subject to Federal income taxes. This regulation appears in the Federal Register for April 5. Teachers may deduct from their taxable income expenses incurred *voluntarily* for further education. Previously, they only could deduct expenses for education *required* by their school boards.

SCHOLARLY AND CULTURAL EXCHANGE WITH EAST EUROPEAN COUNTRIES

The Ford Foundation has announced an appropriation of $500,000 for a program of scholarly and cultural exchange with Poland and other East European countries. The funds will finance visits by professors, research scholars, graduate students, and experts from these countries to the U. S. and Western Europe. The principal objective of the program is to enable outstanding persons in these categories to establish contacts with their counterparts in the West and to learn about recent developments in their respective fields. The appropriation extends the foundation's program of exchange with Poland, which was inaugurated in April, 1957.

COLLEGES NOT YET OPERATING TO CAPACITY

College campuses are not yet operating up to capacity and most qualified students can still attend the college of their choice, reports Dr. Henry W. Littlefield, vice-president, University of Bridgeport. Multiple applications to many colleges by prospective students in order to insure acceptance at one institution are unnecessary, he said. The large number of applications overburden college admissions' offices and delay processing.

A 35% increase in applications for full-time enrollment at the University of Bridgeport in Sept. was noted by Dr. Littlefield. Part of the increase may be the result of multiple applications.

HIRAM'S TUITION BONUS PLAN

Outstanding students at Hiram (Ohio) College will find no financial limits on their ability to take additional college courses under a tuition bonus plan announced March 10 by Pres. Paul F. Sharp. The plan will go into effect next Sept. along with a revised program of intensive study.

Under the tuition bonus plan, students, who achieve a scholastic record of 3.5 and maintain this as a cumulative average, can take additional courses without special permission and without extra charge. The bonus is designed to encourage superior students to take full advantage of their time and talents. They will be able to take more subjects, broaden their educational experience, and thereby enrich their college program.

STUDENTS RAISE MONEY FOR FACULTY SALARIES

Mills College (Oakland, Calif.) seniors annually conduct a personal solicitation campaign and a series of benefits to raise money to add to the college's faculty salary endowments. The students started this campaign in 1954. Paul Naton, vice-president of the college, reports

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"The Ph.D. Fetish," the second in a series of art work by college and university students.

Marlene Macaro
New York University

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Education's National Biweekly

FEDERAL SUPPORT, NOT FEDERAL AID: The Murray-Metcalf Bill

By J. L. McCASKILL
Executive Secretary, NEA Legislative Commission
Washington, D. C.

ON FEB. 17, 1958, Rep. Lee Metcalf (D-Mont.) introduced H.R. 10763 "to authorize assistance to states and local communities in remedying the inadequacies in the number of their teachers and teacher salaries and the shortage in classrooms." The bill was referred to the Committee on Education and Labor. The same week, Sen. James E. Murray (D-Mont.) introduced S. 3311, a companion bill which was referred to the Senate Labor and Public Welfare Committee. Joining Sen. Murray were 12 additional co-sponsors: Mike Mansfield (D-Mont.), Pat McNamara (D-Mich.), Warren G. Magnuson (D-Wash.), John S. Cooper (R-Ky.), Thomas C. Hennings, Jr. (D-Mo.), Wayne Morse (D-Ore.), William Langer (R-N. Dak.), Richard L. Neuberger (D-Ore.), William Proxmire (D-Wis.), Joseph S. Clark, Jr. (D-Pa.), Hubert H. Humphrey (D-Minn.), and Henry M. Jackson (D-Wash.).

The Murray-Metcalf Bill represents a bold step toward the solution of an important crisis in American education. The bill closely reflects the legislative program of the National Education Association which has long called for the Federal government to assume its proper responsibilities toward education and to provide adequate financial support to supplement the inadequate revenues provided by the property tax and state support.

For professional educators there is no need to elaborate on the evil consequences of the continuing shortage of classrooms, or the great number of underqualified teachers in American classrooms. It may be appropriate, however, to explain how the Murray-Metcalf Bill could provide a significant stimulus toward the solution of these problems.

The twin bills call for substantial Federal funds: for fiscal 1958 they ask $25 for each school-age child, totaling approximately $1,100,000,000. In successive years this appropriation rises to $50 for 1959-60, $75 for 1960-61, ending on a plateau of $100 beginning in 1961-62. When multiplied by the school-age population, this means that the bill anticipates an annual expenditure of $4,500,000,000.

The Murray-Metcalf Bill includes a prohibition against Federal interference in the schools, channels the funds through the U. S. Commissioner of Education, and allots them to the official state education agencies. Decisions whether the funds are to be spent for teacher salaries, for school construction or basic equipment, or how they are to be divided between these two broad areas are left to the state education agencies.

The bill also provides that the states and local communities shall maintain their support for school finance. To accomplish this, the Murray-Metcalf Bill defines an effort index; states which fall below the national average will have their allocations reduced.

The national education effort index is derived by taking the total expenditures for the states from current funds and dividing them by the number of children in average daily attendance. Similarly, the state effort index will be calculated on the basis of the number of children in average daily attendance in public elementary and secondary schools, divided into the state expenditure from current funds. Deductions, if any, from state allocations shall be reallotted among the remaining states.

Section 6 of the bill deals with grants for teacher salaries. It calls for each state to certify to the U. S. Commissioner of Education through its state education agency that the salary allotment will be distributed among its public-school districts, to be used solely by such districts for teacher salaries and to be distributed so that three-fourths of the allotment will go to local districts on a flat grant basis determined by the number of teachers in the public-school districts of the state. The remaining one-fourth presumably will be distributed in any manner the state sees fit.

The portion of its total allocation of Federal funds which the state did not use for teachers' salaries would be available under sections 7 and 8 for school construction, including basic equipment, on a project-by-project basis. Each state would file a plan with the U. S. Office of Education indicating how it would allocate its construction allotment among local school districts. On certification of the state, Federal funds would be paid to a local district selected by the state to

receive construction assistance. The state would have full discretion within the total Federal funds available to it for construction purposes to determine the Federal share in any given project.

The Murray-Metcalf Bill breaks away from the pattern of previously introduced grant-in-aid bills for education. First of all, it is not conceived as a "Federal aid" bill—a dole to the schools as if they were the objects of charity. Rather, it is an attempt to rectify the present imbalance of school support in which the Federal government contributes only four cents out of every dollar of revenue for public schools below college level.

Two other major differences are the use of a flat grant rather than an equalization formula for allocating the money to states and the omission of any requirement for state matching. Studies of Federal tax *incidence* (not collections) show that there is considerable inherent equalization in the comparison of revenue coming from the states with the allocations they would receive under the Murray-Metcalf Bill. Since this bill is supposed to add a third layer of revenue for schools to the layers represented by state and local revenues, there is no need for matching. The effort index will help assure maintenance of state and local support at present levels. Experience with the 40-year-old Federal vocational program shows that the states and localities now spend more than $4 for each Federal dollar received even though they are only required to spend dollar for dollar. Thus, the fear that Federal funds will remove state and local incentive to spend for schools seems unfounded.

With official and public interest centered on specialized short-range programs directed toward the shortage of skilled manpower in the technical fields, advocacy of a general, long-range Federal educational program appears to be flying in the face of popular trends. No doubt, immediate results can and will come from programs concentrated on higher education. But as NEA's first vice-president, Dr. Ruth Stout, reminded the House Education and Labor Committee in March, "Our schools must meet the need for increased expenditures for buildings, teachers, and equipment if they are to educate properly the young people that should benefit from a scholarship or fellowship program."

THE ISSUES THAT DIVIDE US

By GEORGE D. STODDARD
Dean, School of Education, New York University

THE TITLE of this article was chosen several months ago—after Sputnik but before today's hullabaloo over the aims and achievements of education in the United States. The problem now is to select a few manageable issues that will serve to define the deep schism.

First of all, let us face what all observers agree upon: the American people are suddenly afraid; they seek a scapegoat. What the Jews were to the vengeful Nazis, the teachers are now in the United States to a powerful clique that guessed wrong. Their guess was that teachers were unimportant in world affairs. The devil reappears as the ghost of the mild, scholarly, and humane John Dewey, a man who worked three quarters of a century to remove from the eyes of youth the blinders of medieval scholasticism and superstition. Dewey held no brief for doing-without-thinking, for "life adjustment" devoid of abstract learning. He was himself one of the great abstractionists of modern times. But there are many who cannot forgive him for holding fast to *action* as a conditioner, concomitant and result of *thought*. He was for life in the living, not simply the having lived; he sought a fresh solution to the mind-body problem, a solution especially congenial to free men.

So, the first issue is "Deweyism," and we should take a careful look at it. A *Life* magazine editorial, March 31, 1958, after a series of dubious statements, makes this one:

> Surely the history of the Crusades can give a young American a better grasp of the problems implicit in the U.N. or NATO than dressing up as a Pakistani delegate in an imitation U.N. assembly at school.
>
> With Dewey's world so demonstrably in tatters, one might think the educationists would run up the white flag. Far from it.

Let us be thankful for that "far from it." Ignoring the fact that countless pageant-loving children have indeed dressed up as Crusaders—and a few rowdies as heathens—we can meet this charge head on. Yes, let us study the crusades, including the horrible children's crusade, bringing to the pupils a better understanding of the social forces involved and relating the whole business to the diverse peoples—including Moslems—to be found in the United Nations.

What of "Dewey's world?" Where is it? It does not characterize American life today, in or out of school, although the schools that are closest

to it have a way of competing successfully for honors in science, art, and literature. Surely France, Spain, Argentina, Cuba, the Dominican Republic, Egypt, and Russia are no part of "Dewey's world." Shall we emulate them?

Jefferson, Emerson, Lincoln, Horace Mann, William James, and John Dewey showed us the wonderful path toward the future of education. They regarded teaching as a source of strength and hope. *Life* magazine holds in low esteem the principles these men made explicit, particularly the idea of broadening the base of the educational structure. It turns to concepts that, under the guise of scholastic virtues, led to a debacle in Italy, Germany, and Japan.

Is it not clear that we cannot be saved by a little more, or less, of this or that subject matter spread over the next 18 years of a child's life? The fateful decisions are right upon us. The terrifying lag is not in any detail of the high-school study of French, but in the failure of the heads of governments to show wisdom, imagination, and courage.

Thus, we talk about schools in the United States as if they were part of a national plan, a Federal responsibility. Actually we have only the systems of Pennsylvania, Illinois, or Alabama and the other states—only such schools as those of Pittsburgh, Chicago, or Mobile. The people have stoutly resisted any plan to permit the United States as a nation to enter into the local school situation. In spite of proposals that would prevent "interference," there is today no general Federal assistance to education. What the Russians have, and are boasting about—joined by some articulate Americans—we deplore. It is a monolithic, party-dominated system headed up by one man. In Russia, variation amounts to subversion; local responsibility is an illusion; parental or pupil choice, a rarety. Do we really want that in America? Or do we prefer what the Bonn government has set up—a system of examinations through which the decision to go to the university, or not to go, is firmly made when a child is 10 years old? (The result: only one out of 20 pupils makes the grade.)

The other issues that divide us are related to these questions of *what to teach* and *how to organize the schools and colleges*. For example,

(1) Shall we have Federal aid to education; if so, how much, according to what formula of allocation, for what ages of pupils? Shall we apply it to school construction, teachers' salaries, scholarships, special aids, non-public institutions?
(2) How shall we effectively teach the gifted among the average in our population?
(3) What scope shall we give to mathematics, physics, and chemistry?
(4) What scope shall we give to the teaching of foreign languages—what languages, to what degree of proficiency?
(5) How shall we balance the humanities and the technical-professional sequences in the education of teachers? Can teaching as a profession be bracketed with medicine, engineering, or law?
(6) Are there sex differences in intelligence, special aptitudes, or interests that should be taken account of?
(7) How can we design better school buildings and use them more effectively around the calendar?
(8) What is the proper place of teaching devices such as films, records, radio, and TV?
(9) What changes in the basic organization of elementary and secondary schools are indicated or in need of study?
(10) How shall we meet the teacher shortage?
(11) What funds are needed? What new legislation?

There is, of course, some agreement on such questions, but every one of the 48 states has a responsibility to make decisions in most of these areas. I have not included racial integration as an issue, for that is one of the choices *not* left to the separate states.

The more we improve our schools, approaching the multiple goal of substantial learning, straight thinking, vocational preparation, and sound human relations, the louder will be the cries of anguish. They will come from parents who fear their questioning children; from persons who profit by the "brain-washing" of the consumer; from aroused sectarian groups; from those who would uncritically embrace foreign elements in the American scene.

By all means, let us damn these torpedoes and move ahead!

THE PH.D. FETISH

By JOHN W. DYKSTRA
Utica (N. Y.) College of Syracuse University

IN AMERICAN higher education there is probably no other single achievement that affects the educator's status more than the acquisition of the Ph.D. As a perusal of any learned society's listing of "positions available" will indicate, a high percentage are open only to those who have their terminal degree. Those with lesser degrees who do secure employment as instructors frequently find that mobility upward is absolutely barred until the Ph.D. is acquired, re-

gardless of other achievements. The close relationship between employment opportunities at the college level and the Ph.D. has led understandably to the widespread reference to the degree as the "union card."

The vital importance to the young scholar of getting the Ph.D. is further indicated by the fact that many alternative opportunities for attaining recognition in the academic world are available only to those who have this degree. Scholarship and fellowship opportunities may be so limited; numerous research grants are restricted to Ph.D.'s. Although the evidence is not so clear, it is also probable that opportunities for publication are affected, in some measure, by the possession of the degree.

Despite this domination of the Ph.D., there exists among those conversant with the realities of American higher education a widespread recognition that the acquisition of the degree provides little assurance that one can competently fulfill the role expected of the American college faculty member. Successful completion of the Ph.D. program may be assumed to be evidence of a significant degree of subject-matter mastery, as well as an ability to carry out an acceptable research project. There is no measurement at all of the extent to which the candidate possesses the ability to convey knowledge of and enthusiasm for his subject to young men and women with little or no background in the field, an aptitude which is vital to the successful performance of the usual professorial role. Nor is there any provision in the program for appraising the future faculty member's ability to work harmoniously and productively on the committee work that occupies so much of the time of college professors. Skills in counseling students, guiding student organizations, and furthering college-community relationships are neither nurtured nor tested in the Ph.D. program. The Ph.D. program has about as much relation to classroom competence as a course in bullfighting has to proficiency in agriculture, to modify a well-known observation of Thorstein Veblen.

In the preoccupation with research qualifications that has dominated hiring and advancement in American higher education, there seems to be little recognition of the fact that good teaching plays a major role in attracting the next generation of researchers to a field. The Knapp-Goodrich study, "Origins of American Scientists," provides ample evidence that the most productive institutions are frequently those with extremely low percentages of faculty members with Ph.D.'s. To do a competent job of teaching, one must have research ability; unfortunately, the converse is not assured.

Why, then, does the steadfast devotion to the Ph.D. requirement persist in these days of increasing shortages of staff? The continued insistence seems, in part, explainable through an analysis of the unintended services which are thus rendered to many strategically placed groups in the academic world.

Sociologists have noted that the ostensible reasons for perpetuating practices in a society often are quite different from the real ones. From a college administrator's point of view, the existence of a Ph.D. emphasis has always simplified the task of selecting personnel to fill faculty vacancies. Meaningful evidence of an applicant's ability to perform with competence the duties expected of him is seldom available. Insistence upon persons with a Ph.D. for the job has served to narrow down the field to manageable proportions before the more amorphous, real considerations must be reckoned with. In a like way it eliminates would-be aspirants for higher rank without the necessity of surveying the significant qualifications that are such a challenge to objective appraisal.

The certainty of a requirement such as the Ph.D. becomes especially welcome if the job requirement is supposed to be concerned to a considerable degree with teaching ability. The sort of evidence that decisions are usually based on would be discarded by any court that made the slightest pretense of maintaining judicial respectability. Recommendations concerning teaching skill are frequently written by persons who never have seen the aspirant conduct a class. Surmises about an individual's teaching ability may be ventured on the basis of known personality traits. Other conclusions may be reached as a consequence of random comments made by students. In the latter case, the unsoundness of the student sample involved would cause any normally conscientious scientist to throw the evidence in the wastebasket without delay.

Vested interests that would suffer from a modification of the status quo have been widely recognized as a chief source of resistance to social change. Those who feel that their security and upward mobility might be adversely affected by a major change in attitude toward the Ph.D. can hardly be expected to be particularly receptive to proposals for a reappraisal. They are naturally cognizant that present practices now rule out of the competition persons who might have comparable or superior talents but who lack the essential badge of respectability. And, of course, those in a position to determine policy on such

matters are disproportionately those who have long since acquired the coveted Ph.D.'s.

The support of Ph.D.'s for the retention of the doctoral qualification may stem from a frank awareness of the personal advantages involved or, more probably, from a rationalization that provides a more socially palatable reason for the real one. For some the Ph.D. was acquired only by dint of great sacrifices of time, money, and effort, so that the perquisites of the label are not likely to be readily abandoned in the interest of progress. Others, who have seen comrades fall by the wayside during the Ph.D. quest, may have become convinced that some sort of defensible, natural selection occurs.

The graduate schools that are busy turning out Ph.D.'s are another vested interest that can be counted on to support the ubiquitous Ph.D. requirements. These institutions will hardly concede their inadequacy in the field of vocational preparation in a day when vocational proficiency is so eagerly sought in education at all levels. Considerations of prestige and finance dictate that the flow of Ph.D. aspirants continue unabated. Administrators realize that many young scholars would prefer to probe into the unknowns of their field free from the confining restraints of the Ph.D. program, and submit to the latter only because it is the necessary passport to academic recognition.

In the determination of ratings among American institutions of higher learning, the percentage of Ph.D.'s on a staff has long been a definite criterion which the appraisers have welcomed. Accrediting agencies automatically assume an inferiority in the quality of the work done in institutions where Ph.D.'s are rare. Those colleges that have corralled, at some additional expense, a staff of Ph.D.'s will hardly wish to forfeit one of their claims to distinction, nor will they wish to concede that their past recognition has rested upon a somewhat dubious basis.

The dysfunctional aspects of the present uncritical insistence upon faculty members who have their doctorates are substantial. In a period when there is an urgent need for personnel for our colleges who can perform their roles with exceptional ability, the present system eliminates many gifted scholars. Since the pool of available Ph.D.'s often gives the college administrator little opportunity for being selective, it is little wonder that mediocrity is distressingly commonplace in American college faculties.

Perhaps the greatest impetus for a reappraisal of the Ph.D. prerequisite will come in the days immediately ahead, when the demand for a new staff is destined to far exceed the output of the graduate schools. There should be less of an inclination for professors to seek security behind the Ph.D. barrier. Positions worthy of the talents of brilliant educators lacking the Ph.D. may be opened to them for the first time as long overdue modifications of past policies are made. There may come belated recognition that new policies need not represent a lowering of standards but, rather, the adoption of much more realistic ones.

If the acquisition of the Ph.D. is to continue to be the key to academic acceptability for college faculty, the requirements for the degree should be made to bear a more meaningful relationship to the work expected of such professionals. Obsolete requirements, that rule out men of demonstrated talents from being considered for responsible posts, should be abandoned. With higher education the gigantic and responsible business that it is, the retention of the prevalent, ill-designed personnel standards is a source of incalculable loss to the nation.

Differentiating the Profession of Teaching

By MAX R. GOODSON
Dean, School of Education, Boston University

PERHAPS one reason the profession of teaching is suffering from low social status is that it has not stratified its personnel who perform the teaching act. "A teacher is a teacher," and all teachers have tenure and move automatically on the salary schedule in accordance with experience and education.

The principle of paying a teacher in accordance with merit has a great deal to recommend it. One reason the principle is now resisted in its application is the difficulty of making a valid difference between teachers. In theory it is admitted that some are more competent than others, but how to make these differences apparent in the system by which the teachers are given status and are rewarded is a problem in need of solution.

It is conceivable that now is the time, in the face of a teacher shortage and a further impending shortage, for the public schools to different-

iate the profession of teaching. More people and better qualified candidates might be attracted to the teaching profession if it were stratified.

There are four categories of teachers that might be established in a school system. The first is that of *career teacher*. Nominees to this category would be highly qualified by their educational background, through their professional awareness and competence, and because of their high motivation to make a life career of teaching. People in this category, and they are to be found in any school system of every size, break the ceiling that is set by any certification requirements or any pattern of preparation for teaching.

A second category is that of *teacher* in its conventional connotation. Persons in this category differ from persons in the first primarily because of a lower grade of leadership capacity. They meet certification requirements and have been produced by accepted patterns of education for the teacher in colleges and universities. Persons in this category should be periodically appraised as candidates for a career teacher position. Devotion to the responsibilities of the profession and demonstrated excellence would be the principal criteria to be applied.

A third category is *associate teacher*. In this group one might expect to find the younger members of the profession, the teachers in preparation and those who have not met minimum certification standards.

A fourth category is that of *amateur teacher*. People in this category would not compete with professional people for pay, but would participate in the educational program of an elementary or high school on a part-time basis and for reasons other than financial gain. These people would be established in the community, and in a profession or occupation, but would not have trained themselves directly for a teaching position.

They may be the mothers of the community who are willing to give a half day, three days a week, to assisting professional teachers in the school's work. They may be the research scientists who devote five hours a week to teaching advanced physics or mathematics to a select group of high-school seniors. Or they may be the retired businessmen who, out of a rich life experience and successful community work, have a great deal to offer young people on the subject of the community.

There are ways in which very fine human talents might be recruited to the educational program of the community if the role of *amateur teacher* should be established and honored. One of the expected valuable outcomes of this role is that the amateur and the professional would interact with one another with a resultant enrichment and vitalization of the educative processes.

Reflections on Dutch Education

By ROBERT H. BECK
University of Minnesota

A FULBRIGHT GRANT has made it possible to observe aspects of Dutch education. Three are reported in this essay. The first concerns "freedom of education," which most Dutch conceive as providing state support for a wide variety of public and private schools.

In 1920, the Dutch passed their famous law permitting any group of parents to form a school society and petition for national and municipal grants to build or lease a school building and to pay teachers. Limitations set upon the privilege were minor. Minimal school attendance was required, since scholastic standards set by the Ministry were mandatory for all schools. By 1950, the distribution of elementary schools was as follows: public, 2,394; Protestant, 1,960; Catholic, 2,623; other private schools, 136. In 1951, 43% of the secondary school students were in the public schools and 57% in private schools. The 57% was split three ways: 20% in Protestant schools, 29% in Catholic schools, and nine per cent nondenominational private schools.

Public schools are decreasing in proportion to the numbers of private schools. According to P. J. Idenburg, "developments during the last few decades indicate a steady decrease in the number of public schools and an increase in that of the 'free' schools, although of late years to a less degree."[1]

Granting national aid to private schools apparently has not lessened hostility between members of the two major religious sects. There is a gulf reflected in a separatism running all through society. Catholics have their newspapers and libraries and Protestants have theirs. Radio time is allotted equally to Catholic broadcasts and Protestant. Even stores are known as Catholic or Protestant.

A concomitant variation of this commitment to "freedom in education" is the variety of Dutch schools. Some follow the Montessori methods (in about one per cent of the classrooms), Dalton procedures (same percentage), Decroly practices, or the Rudolf Steiner plan. But the bulk of the elementary schools are quite traditional, the pupils receiving identical page assignments and reciting in turn. Modifications for individual differences are rare exceptions.

Most American educators would be skeptical of the individualization made possible by either Dalton or Montessori methods, the two most prominently known in the Netherlands for their claim to individualization. In the Montessori classes students work by themselves most of the time, but the didactic materials of Maria Montessori are identical for all pupils and each goes through the same processes, though at different rates of speed. The materials in the Montessori class are useful in mathematics, but are ill-adapted to geography, literature, languages, and other subjects. Much the same can be said for the Dalton system where the students complete "contracts." Again the individualization is in the speed with which the contract is completed. The projects or contracts tend to be almost identical.

Is this an imaginative adaptation to individual differences? Does this invite the student to solve problems?

The "advanced elementary school" (MULO) is a three- or four-year school anticipating a career in an office, or what the Dutch euphemistically refer to as "lower administrative occupations." During the six years of elementary school, the pupil is occupied with Dutch, national history, geography, "natural history" or nature study, singing, drawing, gymnastics, and needlework (for girls) and occasionally simple woodwork (for boys). The advanced elementary school teaches mathematics, physics, English, French, German, and commercial subjects.

Secondary schooling is general and vocational. The former includes two courses of study: Gymnasium-alpha and Gymnasium-beta. In "general" secondary education is found the HBS (Hogere Burgerschool), which has an "A" and "B" program, and the Lyceum, which really houses in one school both HBS and Gymnasium patterns but allows the students to delay their choice for a year. The Modern Secondary School for Girls teaches modern languages, art, history of art, needlework, music, dance, and domestic science to students not intending to go to the university.

The Gymnasium-beta is not a distinct type, but a compromise between the HBS-B and the Gymnasium-alpha, with the student taking both courses of study. It may be that nowhere else in the world is there so freighted a course of study as the Dutch Gymnasium-beta. The HBS-A seems to lead to office work, commercial enterprise, and "administrative occupations," or to university study of economics or social science.

Humanism and realism are represented, respectively, by the Gymnasium-alpha and the HBS-B. The former, emphasizing the classics, requires four years of Greek and five of Latin. In addition, there are English, French, German, and Dutch, history, one year of geography, a course in physics, one in chemistry, gymnastics, and drawing. More science—biology, for example—and more mathematics are required of the Gymnasium-beta student than his colleague in alpha.

The HBS-B adds a course in "mechanics" to its offerings in physics, and the mathematics probably goes beyond that of the Gymnasium-beta. It includes economics and commercial geography, the modern foreign languages and Dutch, but no classical languages.

Graduates of the Gymnasium-beta and HBS-B are admitted to a technical university, or to the faculties of law (except for HBS-B), medicine, physics, economics, and political or social science. The Gymnasium-alpha diploma is requisite for the university faculties of theology or philosophy and literature. Gymnasium-beta students usually gain admission to these faculties, but their competence in Greek will not be so strong as that of the graduate from Gymnasium-alpha.

Secondary vocational education is technical and may be preceded by elementary vocational education, which is quite narrow in scope, the most illiberal of all Dutch schooling. The elementary technical training for boys, for example, is a two-year trade course. At the secondary level, the schooling in technical subjects is both more extensive, involving theory and practice, and of longer duration.

Stimulated by moves at the reconstruction of secondary education in other countries, the Dutch are looking critically at their own schools. They are asking themselves whether the general secondary education is too overburdened, whether it should displace some of the classical language with social studies and provide for more individual research by students in the upper four grades of the five- and six-year secondary schools. There are few extracurricular activities and almost no co-curricular experience.

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[1] P. J. Idenburg, "Education in the Netherlands" (The Hague: Netherlands Government Information Service, 1954), p. 28.

The technical schools, some feel, are lacking in breadth. Actually, the Gymnasium-alpha is not much more general than a secondary technical school. The one is specialized in linguistic lines and the other along the technological. According to what has been done with industrial arts education conceived as part of general education, the Dutch technical schools might adapt themselves to general education quite as easily as the Gymnasium and HBS-B.

One of the most controverted aspects of education in Holland is the rate of failure. Despite entrance examinations, 23% of the secondary school students in 1951 failed of promotion in one or more subjects. In the final examinations the percentage of failure may have exceeded 40. The poignancy of failure is felt more keenly when perceived as a matter of social class position. To fail out of general education and to be forced to enter vocational school is to be threatened with social demotion.

The Dutch are more frank than Americans about the social class influence upon attendance in the secondary schools and universities. The Central Bureau of Statistics for the Netherlands has analyzed the social class position of parents whose children attend secondary schools. For 1949-50, the upper class accounted for 29% of the students, the middle class for 51%, and the lower class for 18%. Only six per cent of the students were from families of industrial or agricultural workers. About two per cent was undetermined.

The class distribution of university students shows 47% from the upper class, 42% from the middle class, and about eight per cent from the lower class. Three per cent is listed as undetermined in social class background.[2]

What can be done about this is currently being debated.

[2] "De Ontwikkeling van het Onderwijs in Nederland," Centraal Bureau Voor De Statistiek (Utrecht, 1951), Tables 63 and 97.

REPORT

AACTE Statements of Position and Resolutions

By J. R. RACKLEY, et al.[1]
Dean, College of Education
Pennsylvania State University

THE American Association of Colleges for Teacher Education expresses confidence in the comprehensive American school which provides educational opportunity for a wide variety of students.

We affirm that the American school has developed far more quality and talent from mass, democratic education than is popularly acknowledged. Objective examination of evidence concerning today's students compared with those of other generations or of other nations is reassuring.

We affirm that today's teachers are better prepared to be educational leaders of boys and girls in the classroom and have had more college training *in the subjects they teach* than ever before. They are devotedly endeavoring to achieve a quality educational program despite distractions of economic neglect, lessening of home responsibility, overcrowding, and complications of school routine.

In making or in considering proposals for improvement in our schools, it is incumbent upon scholars, civic groups, public information agencies, and the American citizen generally to avoid bias and special pleading and to give deliberate consideration to tested facts bearing upon educational problems.

The American Association of Colleges for Teacher Education asserts that attention must be devoted to all elements and to all levels of education in order to determine where support is most needed to extend and to improve the quality of education in the United States. This must be done in orderly and rational ways so that proper action can be taken expeditiously in the interest of better education.

Any action taken to add further quality to

[1] Report of Committee on Statements of Position and Resolutions, American Association of Colleges for Teacher Education, Chicago, Feb. 1958, by Dean Rackley, chairman; Eugene B. Elliott, president Eastern Michigan College (Ypsilanti); George F. Budd, president, St. Cloud (Minn.) College; and Robert I. White, dean, College of Education, Kent (Ohio) State University.

our educational programs must relate, in large part, to the ways and means by which excellence in the preparation of teachers can be assured. This, we maintain, is a problem of sufficient magnitude and importance as to warrant a cessation of needless invective and controversy and immediate concentration on how to meet the problem most effectively without loss of time and energy.

Further, we believe that programs of teacher education so organized and conducted as to assure excellence of teaching on the part of those who complete them will be a contribution to the national interest unmatched in importance. Teachers who are creative and wise in the exercise of their talents, who are just in the exercise of authority, and who are proud in their acceptance of responsibility are indispensable to a people who expect to govern themselves and to meet the challenges of a complex and, frequently, disturbing world.

The American Association of Colleges for Teacher Education emphasizes the importance of strong scholastic foundations for persons entering the teaching profession. Society must make teaching sufficiently attractive in terms of financial rewards and social prestige and status to induce those with the highest level of scholastic ability to enter teaching at all levels.

To meet the exacting needs of a modern educational program, teachers must be intellectually equipped in their respective fields of specialization and in the supporting and basic studies essential to sound programs leading to baccalaureate and advanced degrees.

The professional education of teachers must be of superior quality with proper recognition of the educational level on which teachers will be teaching as delineated by carefully controlled research.

In a free society the schools must produce persons educated in the intellectual skills and disciplines necessary to perform the duties imposed by society and at the same time provide instructional opportunities for the effective development of citizenship as viewed in its broadest terms.

The American Association of Colleges for Teacher Education recognizes the increasing shortage of college teachers and expresses concern over the lack of carefully organized plans to increase the number of college teachers qualified to work effectively in programs of teacher education.

The association urges that:

1. An organized effort be made to identify competent prospective college teachers.

2. Fellowships, scholarships, and grants-in-aid for students preparing for college teaching be greatly increased.

3. Graduate schools examine critically their curriculums for the preparation of college teachers. A critical analysis should deal with such questions as:

   a. What are the competencies that a college teacher of prospective teachers should have?

   b. In what respects are these competencies similar to, and in what respects different from, the competencies required of the college teacher of students other than prospective teachers?

   c. What is the nature of knowledge about research techniques which a teacher of teachers should have?

   d. How can the total pattern of graduate school requirements be improved with respect to the needs of students preparing for college teaching?

4. Experimentation in the development of programs for the preparation of college teachers be encouraged.

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(Continued on page 254)

BOOK PREVIEW

Objectives in Elementary Science*

From the Forthcoming Revised Edition of the Book, "Elementary-School Science and How to Teach It"

By GLENN O. BLOUGH, JULIUS SCHWARTZ, and ALBERT J. HUGGETT

IN SEPT., 1953, SCHOOL AND SOCIETY brought to its pages a selection from Arthur E. Bestor's "Educational Wastelands," a book which later ignited large-scale educational controversy. Continuing our policy of giving readers a glimpse of noteworthy books prior to publication, the editors now focus attention on "Elementary-School Science and How to Teach It," by Glenn O. Blough, University of Maryland; Julius Schwartz, Board of Education, New York City; and the late Albert J. Huggett, Michigan State University. The book will be published this month by The Dryden Press (624 pages, $6.75).

As the nation's publishers prepare to release other books of interest to our readers, SCHOOL AND SOCIETY will first present significant portions from time to time in this new Book Preview section.

STANLEY LEHRER

TRADITIONALLY we seem always to ask first what subject matter children should learn in science. There is no question that the subject matter of science *is* important. We do need persons who are well informed about the world in which they live. An informed person is likely to be an interesting one, we should probably agree. But let us not consider a person educated scientifically just because he can tell us how many legs a cricket has, knows that a pair of pliers is an example of a first-class lever, recognizes a tufted titmouse when he sees one, or can define chemical change. The facts of science are important, but how these facts are put together into meaningful ideas is far more important. We say, then, that *the study of science should help girls and boys come to know some generalizations or big meanings or science principles that they can use in solving problems in their environment.* Perhaps an example will help us see what this statement means. Let us look at a sixth-grade class about to study bacteria and to find out how bacteria help and harm us. The study begins when the teacher says, "Open your books to page 88. Let's read together and see what the book says about bacteria." The first sentence says, "There are three shapes of bacteria: round, spiral-shaped, and rod-shaped." The pupils, having lived in our schools for six or seven years, immediately commit these three shapes to their memories because they know that the first examination question in the "fill-ins" will be: "There are three shapes of bacteria: ....., ..., and ....." Now what problem can you solve with this bit of information? Think hard. Can't think of anything? Neither can we. It is a fact that there are three shapes of bacteria, but if that fact is to become really useful, it must be related to other ideas.

Suppose that, instead of using this approach, we keep our objective in mind and begin the study of bacteria by growing some "bacteria gardens."[1] Nutritive material is placed in Petri dishes. Once the dishes and contents are sterilized, they can be used to grow bacteria.

One "garden" is planted by Bill Sterling, who sits in the front row. Bill has a bad habit of chewing his fingernails and putting his pencil into his mouth every other minute when he does his arithmetic. He volunteers to "plant a bacteria garden" by touching his pencil and fingers to the nutritive material in the Petri dish. The dish is then covered and sealed. Another "garden" is planted by Marie Olsen, who never remembers to bring a clean handkerchief. She shakes her soiled hankerchief over the uncovered Petri dish. Several other children plant "gardens" in various ways. One dish is left unopened. There is discussion about what will happen. The "gardens" are placed in a warm, dark place. They are examined after a few days and the children discover the globs of bacteria growing where they planted them. The dish that was left unopened is still spotless. The children begin to ask questions: "Where did the bacteria come from?" "How do bacteria grow?" What can they do?" "Are all bacteria harmful?"

Next steps include reading from the text, consulting with the school nurse, hearing the school doctor talk about communicable diseases, experimenting, and engaging in other appropriate learning activities. Gradually pupils come to realize this important idea: Bacteria are tiny living things. Some kinds cause disease if they get into the body. The children come to realize other large concepts. Many of them change their behavior accordingly. Bill Sterling sees the rea-

* Reprinted from "Elementary-School Science and How to Teach It," Revised, by Glenn O. Blough, Julius Schwartz, and Albert J. Huggett, by permission of The Dryden Press, Inc. Copyright, 1958, by The Dryden Press.

[1] For directions see W. L. Beauchamp, G. O. Blough, and M. Williams, *Discovering Our World* (Chicago: Scott, Foresman & Co., 1957), Book 3, Teacher's edition, p. 45.

son for keeping his fingers and pencil out of his mouth—"Doesn't make sense to *help* bacteria get into your body." Marie Olsen remembers to bring a clean handkerchief in the morning. Pupils stop putting their lips down on the drinking fountain when they are thirsty. They no longer circulate candy bars and apples for everybody to have a bite. Along the way they have learned about the three shapes of bacteria. But that has not been an end in itself. They have learned to fit this fact and others together to give real meaning to a concept, or science principle, or generalization.

These concepts in science are not discovered automatically by exposure—as one catches the mumps. They come to be part of the child's mental equipment when the teacher *intends* that they shall and helps the children to arrange the learning experience accordingly. They come to be real as the result of many experiences. They are put together gradually as the children proceed. They *are not memorized* from some printed material but are built from many experiences.

Now how do these concepts, as they are comprehended by children, fit into our large pattern for children in the elementary school? If we look back over what was said about the objectives of elementary education, we can see that these generalizations cannot result without the use of the fundamental skills of learning. Here is a place to use reading to find out, writing to record findings. Understanding these large concepts involves intelligent, accurate observation, skill in identifying and solving problems, planning together, and evaluating— that is, if the teacher *intends* to see that these things result. It means, however, that the teacher must stop *telling* children the answers. It means that the teacher must help to make the problems real and challenging. She must let the pupils do their own planning to solve the problems. She may let them make some mistakes in plans and judgments so that they can see the results of such errors and have a better understanding of how they come about.

Understandings of the kind described certainly have much to contribute toward physical health, provided the experiences are real and graphic and provided the learnings are applied to living. Information in science—the large concepts in science, that is—is essential equipment in the lives of boys and girls, just as information in the other areas is. All of us would prefer to live with people who are well informed, and no one can be considered so who has not learned some of the fundamentals of scientific knowledge. The effective teacher pays more and more attention to the selection of appropriate content materials and to the methods of making them meaningful.

We also say that a study of science should *help pupils to grow in ability to solve problems effectively*. Although this is considered one of the most important objectives, teachers generally pay too little attention to it. No one ever became a better problem solver by filling in blanks in a workbook, by looking up the definition for something, or by just living in the same room with a rack full of test tubes and a set of science books. How, then? By solving some problems—some real problems that have meaning to the learner and make a difference to him. By being conscious of the essential process involved in problem solving, by using this process over and over and thus becoming convinced that there is a way to solve problems that is good because it produces reliable results.

Now this does not mean that at the elementary level we drag out the ladder of problem solving every five minutes and make pupils climb the steps: stating the problem, making several hypotheses, gathering data, applying these data, and drawing and checking conclusions. What then? It means, first of all, that we stop *telling* children so much and that we stop thinking that our responsibility is over when we say, "Look it up for yourself; you'll remember it longer!" It means that we begin to give more and more attention to helping children formulate and find solutions to their own problems. These problems may arise because of the children's experiences: "Miss Brown, last night I saw the moon come up. It was bigger than ever and was the color of oranges. How come?" They may result from children's reading: "Miss Brown, it says here that sunlight is made of all different colors. How can that be?" Problems may come from a book, from experiences, from excursions, and from many other places. Later we shall discuss more fully the selection of problems. Learning to solve them in a truly scientific spirit is as much our goal as the learning of the subject matter itself.

Let us illustrate one way to accomplish this goal, by relating an actual experience from a sixth-grade class. A wing is being added to the schoolhouse, and construction is going on just outside the window. Children watch at recess with their noses pressed to the window. They see men with pulleys lift wheelbarrows full of bricks; they see steam shovels at work, elevators being built, and all sorts of machines cutting, digging, pulling, and pushing. It is the chief topic of conversation. The teacher watches too. The children raise problems: "How can a man lift a big hunk of the cement sidewalk with an iron bar?" "How can a man lift a hundred bricks by pulling down on a pulley rope with one hand?" These and other problems are raised, stated carefully, and recorded. The teacher, a sincere, curious person, says, "I'd like to know how these machines work, too." And she adds some of her own problems to the list. As the study proceeds other questions are added to the list.

Then, because she has an eye on the objective of improving ability to solve problems, she says, "Now these are good problems. How shall we find the answers?" And the pupils, after some discussion, say, "We can experiment. We can look in science books and library books. We can ask the workmen. We can ask other people who know. We might watch the machines more closely. We might find a motion picture that will help us." After these possibilities are considered the pupils select a problem to begin with and work begins.

To help begin the work of problem-solving and

to help pupils see how experiments may help solve problems, the teacher comes into the classroom one day with a brick and a six-foot board, which she picked up at the scene of construction. She says to her class, "Can anyone in this class lift me?" After a quick survey everyone gives up without trying, and she says, "Can anyone in our class use this brick and this board to lift me?" Some of the pupils volunteer. They place the brick on the floor, place the board on it with more of it on one side of the brick than on the other, and say to their teacher, "Miss Wright, stand there," pointing to the short side of the board. Miss Wright does as directed. The pupils push down on the other end of the board and up comes Miss Wright. A lever has been used to lift a weight. Other children try to lift her. The smallest girl in the class lifts Miss Wright without difficulty. "How come?" "How does it work?" The pupils begin to observe what has happened. They observe that this is similar to the iron bar and the hunk of cement sidewalk. They see that the push goes down and the weight goes up. They see that the push goes farther than the weight moves. They move the brick closer to and farther away from Miss Wright. They go out to the seesaw and try lifting each other by sitting at various distances from the teetering point. These are some of their *doing* problem-solving activities. They are *seeing* and *feeling* how the levers work. They have used a lever to do real work.

They gather reading materials to find out more about levers and how they work and are used. In so doing they practice the language-arts skills of locating materials by the use of index, table of contents, and card catalogue. They plan an interview with an eighth-grade general science teacher to ask him questions about machines and how they work. This calls for making an outline of their findings and for making a well-organized, clear, oral presentation to the class. They locate pictures that can be arranged in sequence to show some of the ways in which machines are helpful. They find a motion picture that will help to clear up ideas about how machines work. They devise other ways to gather information, test it, and apply it to their problems about machines.

From this learning experience they discover more about how to state their problems carefully, they learn how to collect appropriate materials to solve them, they test their findings, they record them in brief sentences. Later, in discussing her work on machines, Miss Wright says, "The study of machines seemed very successful because the children wanted to know the answers and were interested in setting up ways to find out. I learned something about problem solving myself. I learned, too, that simple material was most useful, that near-at-hand problems raised by the class were important, and I came to know that the pupils liked solving problems that were their own."

And so learning to solve problems is one of our important objectives. How does this fit into our general elementary-school plan for children? Certainly our success in living with one another is increased if we are skillful in solving our daily problems, knowing what is pertinent, reliable information, learning how to apply it, knowing how to check the validity of results. Problem solving, if it is truly scientific, provides ample opportunity for real cooperation and for giving and taking advice and criticism, and it produces a satisfying experience from a job successfully done. But make no mistake about it, these things do not automatically result from a study of machines. The teacher must plan to teach in a way that will bring them about.

The field of science provides children with countless problems that are of real concern because they are near at hand and possess a fascination because of their nature. Then, too, the same method used in solving problems in science is used successfully in social studies, arithmetic, or, indeed, in living together at school and at home. This is true in so far as we pay attention to the problems children find, let them have some voice in how the problems are to be solved, and are on hand to help in the solving when we are needed. More is learned about problem solving in half an hour when pupils are working on something that really seems to concern them than is learned in hundreds of hours when children are pushed to work on something that is too difficult for them or is presented in a deadly routine manner.

It is also important to note that pupils need help to see how this method of problem solving in science is like problem solving in other areas. They may never make this connection unless it is pointed out to them. The teacher may frequently say, "You remember how we found the answers when we worked on the problems about machines? How can we use what we learned there to help us find the answers in this new problem in our social studies?" Or the new problem may be, "How can we organize a good safety patrol for our school?" Such problems as this help pupils to transfer the lessons of problem solving to their everyday living.

If we are to attain our objective, we must remember what it is. If we *intend* to produce better problem solvers, we must bring about situations that require good problem solving, and the answers to the problems must have some importance to the learners when they have been found.

We also say over and over again that *the study of science should develop in children a scientific attitude.* We say this, but we need to *do* more about it. The development of a scientific attitude, like the development of better problem solvers, comes about only through conscious attempts to make it happen. First, to achieve this important objective, we must understand what it means. Then we must teach so that children cannot get along without using a scientific way of thinking. What, then, does having a scientific attitude mean? Here are some of the characteristics that a scientifically minded person possesses:

He is open-minded—willing to change his mind in the face of reliable evidence—and he respects another's point of view.

He looks at a matter from every side before he draws a conclusion. He does not jump to conclusions or decide on the basis of one observation; he deliberates until he is sure.

He goes to reliable sources for his evidence. He challenges sources to make sure that they are reliable.
He is not superstitious; he realizes that nothing happens without some cause.
He is curious. He is careful and accurate in his observations. He plans his investigations carefully.

It is these characteristics that we are trying to develop in children through their scientific experiences. But it is possible to work with scientific apparatus, read source books, recite in science classes, set up exhibits for science clubs, and do a lot of other things without making a gram of use of the scientific attitude. This happens every day in some of our science classes, because we do not actually *try to see that scientific attitude is emphasized.* We do not teach with this objective always in mind. Every time an experiment is performed, whenever children read, take a field trip, see a motion picture, report their findings to the class, set up a problem to solve, or do anything else in science classes, their scientific attitude ought to be showing! They should not do anything without it. It should become a real part of their thinking equipment. There should be much of "Hey, wait a minute!" "Let's try that again." "How do you know that's true?" "I've changed my mind since I read what scientists say." "Where did you find that answer?" "You may be right but tell me more about where you found your information." These remarks and similar ones should be heard often in our science classes—and not only there, but also in social-studies classes, arithmetic classes, and anywhere else where children are working together at solving problems.

Now let us be specific. In a fourth-grade class the pupils have been studying plants and how they grow. They have experimented to see that plants need water to grow. Someone asks, "Where does the water go?" To answer this question the pupils take a stalk of celery, cut off the bottom of the stem with a sharp knife, and set the stem in a jar of water colored with red ink. Later they examine the stalk, cut it open to observe the channels, and note the colored veins in the leaves which show where the water went. Someone then remarks, "The books says that some of the water goes off from the leaf into the air." The teacher asks, "Could you suggest a way to find out whether this is true?" Someone suggests that they put something over a plant to catch any water that might come from the leaf. Pupils suggest that they invert a quart jar over a small geranium plant. They do this and the next day notice that there are tiny droplets of water collected on the inside of the jar. "How many of you think this shows us that the geranium leaves give off water?" the teacher asks. The class members seem to agree that it does. *But they shouldn't.* The water might have come from the soil in which the plant was growing or from the air around the leaf.

The teacher cautions them to reconsider, because she believes in the importance of helping pupils to think more scientifically. As a result, someone suggests, "Maybe some of the water is coming from the soil. We ought to cover the soil with a cardboard." "That's a good suggestion," the teacher says encouragingly, and the experiment is reassembled in its improved form. Again the water condenses on the inside of the jar and the pupils are about to be satisfied with the results when somebody says, "Maybe the moisture is coming from the air. It could be, you know." And indeed it could. The teacher comments favorably on this kind of thinking and says, "How can we set up our experiment to make it more reliable?" Someone suggests using two sets of equipment exactly alike except that only one jar contains a growing plant. "Then if that jar with the plant has water on it and the other one doesn't, we'll know that the water really came from the plant."

The group performs other, similar experiments and does further "research" reading before pupils finally decide that plants give off water into the air. The teacher *intends* to see that the scientific attitude is kept in action,

Does it take more time to experiment in this way? Yes, it does. How better can you spend time than in helping boys and girls be more careful and accurate in their judgments? Frequently in the performance of experiments the subject matter learned may be of less importance than the method used and the attitude acquired. This is often said, but we frequently forget to emphasize the method and attitude. This method of questioning, checking details, expressing opinion, and withholding judgment should be used whenever experiments are performed, whether they come from a basic textbook, a supplementary science book, or are originated by the children.

Experiments that do not work as they are supposed to work the first time they are performed often produce the best learning situations imaginable. To figure out *why* an experiment did not work often brings into play the best thinking possible.

Whenever children read, there is plenty of opportunity for the application of scientific thinking. When young children ask, "Is that a really true story?" there is opportunity for them to get acquainted with the differences between factual material and fiction and to learn that one is used for the purpose of finding the answer and the other more usually for entertainment and enjoyment.

The pupils' discovery of mistakes in books may be a landmark in the development of their scientific attitude. To realize that a statement's appearance in print is no guarantee for its accuracy may be an eye opener to a child who is being introduced to reliability as a criterion for selecting material to read for answering questions. One book, for example, may state, "There are eight planets"; another may say, "There are nine known planets." Here is an opportunity for discussion to show that scientists are continually adding to our knowledge. Children come to appreciate the importance of using up-to-date material for reference work. They come to know that such words as "known," as it is used in the sentence about the number of planets, are extremely important, as are such phrases as "scientists think," "it is generally believed," "it may be true that," "some people say," "evidence seems to indicate that." Again, it is this same attitude that should permeate our activities in social studies and other areas of learning in the elementary school.

The following quoted letter written by an eight-year-old to an author of a book is an illustration of challenging the accuracy of information:

Dear———

You wrote a book called the *Pet Show* didn't you? One of the stories in it is called the "Guinea Pigs at the Show." One sentence says, "They can run about when they are only a few days old."

This is not true.

They can run about the day they are born.

Yours truly,

MARY LOU ———

P. S. I raise them.

Here, obviously, is a pupil who is learning to evaluate some of her reading and to relate it to her own experience. Some adult, either at home or at school, urged her to write to the author to find out why her experience and the book did not seem to agree. Through such an experience the child learns something about how books are written, how limited experience may sometimes be misleading, and how different statements of fact may only *seem* to be in disagreement.

Spectacular stories from newspapers on such subjects as "Men from Mars," "Death Ray Bombs," or "The Future of Our Earth" provide materials for use in developing the scientific way of looking at things. Who has written the articles? What do the words actually say? Is the article setting forth theories or facts? These questions and similar ones are important in discussion.

Children's reports of horsehairs' turning to snakes, and other superstitions, should come in for their share of investigation and checking to develop scientific attitudes. Statements such as these are often made by children: "You can't believe the weatherman!" "Animals can tell if the winter is to be very cold." "Fortunetellers can help you tell what is the best thing to do." These remarks offer excellent opportunities for the use of scientific investigations and checking. They involve finding the answers to such questions as, "Who says so?" "How can we find out the facts?" "Why do some people say these things?"

The results of a field trip to the local water-purification plant may show how inaccurate some of the pupils are in noting and remembering things they see and hear. Checking these observations may become one of the most important activities relating to the trip. Alert and discriminating eyes and ears are good equipment to have in and out of any science class.

We have given but a few examples of situations that can help transplant a scientific attitude from the printed page into the minds of children. We shall present other ideas for accomplishing this important aim as we go on. Watch for them in the B chapters in Parts Two through Four.

If you reread the paragraphs describing the objectives for the total school program, you will easily see how our objectives for helping children to gain a scientific attitude fit into our general intention for the elementary schools. Compare them, for example, to the objectives in the field of social studies and the relationship becomes obvious.

Science is, furthermore, supposed *to create in children an interest in and an appreciation for the world in which they live.* Just now, as this is written, the evening sky is flaming with a hundred hues. The clouds five miles away, made of countless droplets of water, are reflecting this light through the window. The window glass itself was made by heating sand to which chemicals have been added, and the result offers protection from the weather. Growing almost into the window, leaves of a vine glisten green in the light of late afternoon. In leaves such as these the food for the world is being made. The leaf is a wonderful manufacturing plant where water, lately fallen from the sky as rain, comes up from the roots in the ground and meets with carbon dioxide from the air. There in the green leaf, in the presence of sunlight, food is manufactured from this water and carbon dioxide. On this the whole world depends for its existence. In the world there are, indeed, great things to wonder about: How can light be changed to brilliant colors at sunset; how are clouds formed; how is glass made; how do plants manufacture food; indeed, how did the world itself come to be, and how has it changed through the ages of time? Someone has said, "He who can no longer pause to wonder is as good as dead."

Young children deserve to find in schools a nurturing influence for their natural curiosity about their world. They deserve, too, to have this curiosity expanded to new fields, about which they have never wondered because they do not know that they exist. They deserve opportunity to come to appreciate, through understanding, the wonders of the world into which they have come. About how this appreciation is to be developed, we still have much to learn. Experience seems to show that children do not gain it through listening to the sentimental gushing of some adult. Perhaps it comes about through adults' providing opportunity for children to discover for themselves, with the help of their fellows and the guidance of the adults with whom they live. We can perhaps provide opportunities to observe at first hand, to feel, to see, to use the senses so that satisfactory experience will result. Perhaps through knowledge thus gained—through satisfactory experiences—each child may for himself develop an appreciation that fits his person. Certainly there can be great thrills in discovery, great satisfaction through contact with natural objects and phenomena.

As these paragraphs were being written, the colors have disappeared from the west. Twilight is here, and soon night will come. The earth is turning from the sun, darkness comes. Elsewhere the earth is turning toward the sun and day is coming. In a few weeks the leaves will drop from the vine outside the window, the days will grow colder, autumn will have come, then winter, then spring, and again summer. Here is the cycle of the seasons. Then there is the cycle that water follows as it disappears from the earth and appears again, falling from the sky as rain; the cycle of seed from tiny germ to adult plant and the production of seeds again. These are some of the

phenomena to which we wish to introduce young children through experiences that they will remember with pleasure. This is what we have in mind when we talk of increasing interest and developing appreciation. As in the case of the other objectives discussed, this one is realized only if we intend it to be and teach accordingly.

Perhaps we have talked too emphatically and too long about objectives. But they are important, for they guide our science teaching in every detail. We shall refer to them again and again and try to make them even more concrete throughout this text. Every day we teach, we should challenge the things we do with children by asking ourselves, "What exactly is this supposed to do for children?" If the answer is questionable, then let us try hard to find a better way of teaching. If the answer is satisfactory, let us strive to increase the effectiveness of what we are doing. Above all, let us keep in mind that science deserves to be included in the elementary curriculum only to the extent that it contributes toward the goals of the total program. This point of view largely determines what subject matter is selected, how the teaching proceeds, and how the results are evaluated. Indeed, science has certain unique things to contribute to the growth and development of children, but these are realized only if we *intend* that they shall be and are willing to see that science learnings fit into the total experiences of children.

What we have said about keeping in mind the objectives of science holds equally true for the teaching of every other subject in the elementary school. We point this out to emphasize our contention that science teaching is very similar to the teaching of other subjects. Great strides could be made in our educational program if we applied to the curriculum the following criterion: Does the study of this problem, the use of this activity, this plan of work actually contribute to the attainment of our objectives? If problems, activities, and plans that did not meet this standard were discarded and replaced, our school program would be immeasurably revitalized.

CORRESPONDENCE

Technology for Liberal Artists

RETTALIATA (SCHOOL AND SOCIETY, Feb. 1) goes on record as saying that any curriculum "not broadened to the extent of including an understanding of science and technology is not balanced or relevant and, therefore, not liberal." Readers of the Rettaliata report may be interested in an attempt to outline a specific course on technology which *would* be liberal, in answer to a good deal of current nonsense about teaching engineering to liberal arts students.

I do not believe that even the proponents of this latter view are really convinced that liberal arts students should or would be liberated by a course on the tensile properties of metals (though I am fully aware that professors of the liberal arts seem to be convinced that a course designed for English majors ought to be liberating for engineers). On the other hand, I agree with them that a knowledge of and insight into the technology on which our society is based would have a very liberalizing result, indeed. Hence, the following outline for a course:

Technology and Life

1. *Technology of prehistoric man*—This is a fascinating study; there is oodles of material on it; provides a view of what technology, in its basic form, really is; and leads into very entertaining questions of scientific method as well as some general archeological considerations.

2. *The technology of an early civilization*—preferably Egypt. This can be a humbling study as well as a fascinating one; anthropologically insightful, again some possibilities for stress on scientific method, and a good look at a sophisticated, but still crude and completely understandable, technological level.

3. *Technology as a molder of social thought*—A look at the rise of capitalism and Protestantism, as an example of how the general requirements of a new state of technology and the organization of tools can influence the framing of new religious doctrines. Readings from Tawney and Weber as well as some of Pirenne's descriptions of early factory methods, etc.

4. *Technology takes command*—A thorough study and discussion of a couple of chapters from the book of the same title, preferably including Giedion's development of the technology of death, with the question of the relation between the mechanical and the organic.

5. *The engineer and modern society*—An examination of the role of engineer in policy-making, using Veblen as a text.

6. *Technology and the arts*—A study of architecture, painting, the popular arts, artifacts of modern life, etc., in relation to the underlying technology to which they must conform or by which they are influenced. Materials are legion.

7. *Technology and world survival*—Examination of some of the questions posed for survival by modern technology: the hydrogen bomb, fallout and its biological consequences, etc.

It would take a good year, I think, and require at least a pair of seminar leaders—one, an engineer, and the other, a well-grounded humanist.

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ON " 'BESTING' BESTOR"

C. WINFIELD SCOTT (SCHOOL AND SOCIETY, Dec. 21, 1957) may be quite correct in his assertion that my survey (SCHOOL AND SOCIETY, March 16, 1957) of Arthur Bestor, Jr.'s facts and fallacies would have been more effective if it had "dealt more fully and adequately with fewer topics." I hope that he and others will feel free to do this. I had no intention of trying to convert Bestor, whose reputation depends on his remaining unconverted. But, rather, I had hoped to suggest to others that they could tell read him critically—if they read him at all. Nor was my purpose to prove that one or two things are wrong, but rather to show that his whole structure is unsound.

First, one needs to know some of the facts, such as the ones I stated categorically on a level with H_2O is not the same as H_2O_2. The support for these facts may be found in many studies. The statistics I did document. The errors involved citing numbers of schools without giving their size and changing the base in comparing percentages. For more detailed documentation, see the article in the March, 1957, *School Executive,* by Walter C. Eells.

Second, one needs to be on the alert for semantic tricks. As late as Sept. 8, 1957, in *The New York Times Magazine* (condensed in the *Education Digest,* Jan., 1958), these tricks were still evident, even after Bestor "has shown some inclination to recognize the contribution of psychology to education." (The italics are mine, not Bestor's): "The *dishonest way* is to steer such students [children who learn slowly] into courses and curriculums that have been *drained of intellectual content,* and then to *rationalize* the process by *lush words* about 'real-life needs,' 'enriched experience,' and 'democratic living.' " In this revealing paragraph he smears his opponents and at the same time accuses them of using the same semantic devices he himself uses so freely.

Those who know the facts know that the terms he has picked out are not "lush words" at all, but are actually shorthand expressions for specific procedures that have been found to be valuable in promoting learning for the slow learners—and for others as well. To specify—"real-life needs": *e.g.,* distinguishing stop and go signs, making change, keeping accounts, driving a car, filling out blanks, reading ballots, studying insurance policies, acquiring technical skills, etc. "Enriched experience": *e.g.,* seeing, hearing, and handling (whichever are appropriate) as well as talking, reading, and writing about flowers, trees, stones, animals, music, stores, machine shops, industries, museums, galleries, etc. "Democratic living": *e.g.,* choosing teammates, committee members, officers, practicing working on committees, abiding by majority choice, considering minority interests, studying democratic processes, etc. To provide such a program is surely fairer to the mentally handicapped than forcing them to study "disciplines" which they neither can understand nor use. Amid the dizzy controversies aroused by the sputniks we shall need to be doubly careful not to be misled by false "facts" or to be fooled by semantic tricks.

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The Problem of Youth Behavior

SINCE THE BEGINNING OF 1958, the newspapers and other mass media have been featuring stories of juvenile delinquency and crime. The statistical figures mount steadily upward. Dramatic incidents keep the problem of young people's behavior constantly in the public eye.

In New York City, the publicity has been more intensive than in any other community, but the significance of delinquency is nationwide—indeed worldwide. Reports are written, attitudes of indignation arise, and almost every type of person from educator to elders is blamed for the deplorable situation.

There have been initiated, during the past months, concrete measures to meet the challenge of delinquent conduct in the schools and outside: suspensions and expulsions, special schools for behaviorally difficult pupils, court actions, and the like. No matter what one may think about a specific remedy, it is important to realize that the intentions of the improvers and the reformers are good.

But it is not enough to attack the problem piecemeal. There are few societal levels or socio-economic groupings which are not concerned in one way or another with young persons. It seems obvious that, in order to attack a serious difficulty, it is necessary for all of them to work together.

Many, including this writer, have urged in the past an all-society approach to juvenile delinquency and crime: co-operation by home, school, church, government, labor, industry, etc. This idea has become a platitude, although it appears repeatedly in reports and statements whenever a new juvenile crisis erupts.

It is time to take direct and immediate steps. Our suggestion is for a series of conferences on the community, state, and national levels, not so much for the purpose of gathering additional data as to achieve a consensus for concerted action by all agencies. There have been conferences and conferences, it is true. But if we are deeply concerned with the juvenile situation, we must decide to work as a unit. The conference method is suggested as a first step in this direction. Possibly the technique of the recent White House Conference on Education might be utilized, but let the results not be buried in a report.

In our preoccupation with young delinquents, it is vital that we always remember that the majority of youth is well-behaved. It is unjust to tar the entire generation with the sins of the few. However, the few can exert an impact out of proportion to their numbers. Extreme forms of behavior, as well as the less virulent deviations from good conduct, have to be treated at once, if the welfare of the individual and the group is to be maintained.

Enough of letters to the editor, reports, and partial solution. Let the agencies of society resolve to get together and attack the problem of juvenile behavior *en masse*.—W. W. B.

NEA EVALUATES EDUCATION

THE NATIONAL EDUCATION ASSOCIATION announced, March 4, its decision to undertake an evaluation of present-day education on the elementary and high-school levels. The evaluation will be concerned with education in a broad sense rather than with the schools as institutions. This will be the first project of the NEA's newly organized Council on Instruction.

"The purpose of the project," said Lyle W. Ashby, assistant executive secretary for educational services of the NEA, "is to provide some general guidelines which professional and lay leaders may find valuable in dealing with such frequently raised questions as: How can we evaluate our present school curriculum in view of the needs of modern society? How can the quality of our educational program be evaluated in the local system? What is the role of national testing programs? To what extent does our present program provide 'education for all'?"

The forthcoming evaluation project will be under the direction of Doak S. Campbell, former president of the University of Florida (Tallahassee). Dr. Campbell, who also has been director the the Senior College and dean, Graduate School of Peabody College (Nashville, Tenn.), is widely known for his work in the field of curriculum development.

The NEA's Council on Instruction, in its initial stage, is temporary as to structure and is composed of staff representatives from those NEA departments, committees, and divisions which have a major interest in instruction. A steering committee, working with Dr. Ashby and Dr. Campbell, consists of the following persons: Paul E. Elicker, executive secretary, National Association of Secondary-School Principals; Vanett Lawler, executive secretary, Music Educators National Conference; G. Kerry Smith, executive secretary, Association for Higher Education; Ethel Thompson, consultant for elementary education, NEA; and Rodney V. Tillman, executive secretary, Association for Supervision and Curriculum Development.

JOB SATISFACTION IN MENTAL HEALTH

INTELLECTUAL STIMULATION, not pay or prestige, is the most important factor in job satisfaction among professional workers in the mental health field. This was reported Feb. 24, 1958, at a regional research conference on the sociological aspects of psychiatry, American Psychiatric Association, meeting at the

Ohio State University, by three staff members of the Columbus Psychiatric Institute and Hospital, Drs. Salomon Rettig, Frank N. Jacobson, and Benjamin Pasamanick.

A survey of 468 Ohio professional people disclosed that intellectual stimulation was regarded as the most important factor of job satisfaction by professional groups. Other factors, in order of their rank of importance, were freedom, security, pay, patient respect, status and prestige, type of patient, and regular hours.

"One implication of these findings is that the administrator who wishes to augment work satisfaction, and more specifically, to raise morale and/or reduce staff turnover should not assume that a salary increase by itself is an adequate solution." It was "conceivable" that a salary increase might be regarded not only in its purely monetary aspect, but also as evidence of status and recognition. "Raises granted . . . in a desultory and grudging way could conceivably obliterate the effect of raises, [while] . . . ready and sincere responses to the needs and interests of a group might add immeasurably to the effects of raises."

The authors suggested that "the professional might find increased satisfaction in his work if he were given greater opportunity and encouragement to develop his own research interests, without the introduction of calculated investment-return benefits."

LIFE MAGAZINE'S DISTORTIONS

THE PHILOSOPHY OF EDUCATION SOCIETY, meeting in Indianapolis, adopted the following statement in its annual business session on April 1:

The Philosophy of Education Society, whose membership represents all major philosophical points of view now current in American life, meets annually to consider the state and character of education and to analyze its problems. It was pleased to note, therefore, that Life magazine is presenting the problems of American education to the public. Especially was it pleased with an emphasis placed in the March 31st editorial—namely, "we need to do some thinking about the true ends of education."

But its pleasure was dissipated quickly. The intellectual inadequacy of the editorial renders the reader helpless to deal with the issue. Many within this Society agree with some details of the criticisms presented in the editorial. All within it have for years directed pointed criticisms against educational aberrations. None believes, however, that philosophical wisdom will be generated by loose and inadequate, if, indeed, not irresponsible, statements. And it is a travesty, in educational terms, to have this editorial presented as an advertisement in the March 26th issue of The New York Times. Confusion will be worse confounded.

It is a matter of deep concern to the members of this Society, many of whom have never agreed with the thought of John Dewey, that a popular magazine, ostensibly concerned to enlighten the people, should single out a statement from this philosopher and so present it as to have it say what, in context, it did not say. Life quotes Mr. Dewey as follows: "we agree that we are uncertain as to where we are going and where we want to go, and why we are doing what we do." Mr. Dewey did write these words, in Fortune, August, 1944. He did so to point up the confusions in thought then plaguing American education. He did not suggest, as the editorial implies that he did, that education should be an aimless affair. His intention was precisely the opposite. Misrepresentation of positions by such use of quotation is misleading and makes the writing suspect.

The enterprise of philosophy of education, never more urgently needed than now, will not be helped by distortion. Such writing does a dis-service to education and, above all, to the American people. Nor will the philosophic Spirit be advanced, if the naive assumption is made that answers to this critical problem may be made by pre-judging the case.

The retiring president of the Philosophy of Education Society, the Rev. R. J. Henle, S. J., dean, Graduate School, St. Louis University, will be succeeded by Prof. Everett J. Kircher, Ohio State University. The secretary-treasurer, William E. Drake, University of Texas, was re-elected for the eighth consecutive year. Prof. Ernest E. Bayles, University of Kansas, was elected to the executive committee. Other members of the executive committee are Prof. Stafford Clayton, Indiana University, and the retiring president, Father Henle.

RESEARCH ON COLLEGE PERFORMANCE

THE COLLEGE ENTRANCE EXAMINATION BOARD is interested in considering preliminary statements of research plans in the general area of non-intellective factors related to college performance. Since its previous announcement to this effect in the spring of 1957, the Board has undertaken to support the following studies in this area: Dr. Edward F. O'Day, San Diego State College: "Measuring non-intellective factors via aptitude and achievement items types"; Dr. Paul F. Lazarsfeld, Columbia University: "A review and analysis of college performance and of its non-intellective components"; Dr. Natalie Rogoff, Bureau of Applied Social Research, Columbia University: "Colleges, careers and social contexts"; Dr. Peter H. Rossi and Dr. James S. Coleman, National Opinion Research Center, University of Chicago: "The processes of college choice and their consequences"; Dr. Cliff W. Wing, Jr., Tulane University: "Class and cultural corrections for test scores and school records as predictors of college performance." In addition, the Board also will continue to support a number of the research projects in this area that were announced last year. This will mark the third year of the Board's expanded program of non-intellective factors research.

Investigators interested in submitting preliminary statements of research interest should first request a copy of the announcement delimiting the nature of the Board's interest in this research area. Preliminary statements received by July 1, 1958, will be considered for support beginning on July 1, 1959. All investigators submitting preliminary statements will be informed of the Board's decisions by Dec. 1, 1958. Address all correspondence to Dr. Joshua A. Fishman, director of research, College Entrance Examination Board, 425 W. 117th St., New York 27, N. Y.

Educational Ticker Tape . . .

(Continued from page 234)

that "the last four graduating classes from Mills, each averaging less than 100 students, have raised almost $25,000 toward this special fund." Prior to 1954, the senior classes raised annual gifts averaging about $100. The sum raised by each class is dramatically made public on graduation day when, at the height of the proceedings, the chairman of the graduating class hands to the president of the college a sealed envelope containing a check for the proceeds of the annual campaign.

U. S. ASSISTING LEBANON AND ECUADOR INSTITUTIONS IN NUCLEAR TRAINING

As part of the Atoms-for-Peace program, the U. S. for the first time is assisting institutions of higher learning in other countries—one in Lebanon and another in Ecuador—to carry out educational projects designed to further the use of nuclear science for peaceful purposes. These educational and training programs in nuclear energy abroad are administered by the U. S. Atomic Energy Commission with the co-operation of the International Cooperation Administration.

Several hundred students from more than 50 nations have received radioisotope techniques training at the Commission's facilities, Oak Ridge, Tenn., Institute of Nuclear Studies, and last year similar courses in Spanish were inaugurated at the University of Puerto Rico where a Commission nuclear training center is being established.

The Commission is conducting a four-week training course on the application of radioactive isotopes in medicine and agriculture at the American University of Beirut in Lebanon. Approximately 20 medically trained persons from the region including Pakistan, Jordan, Turkey, Afghanistan, and Lebanon are attending the course.

TV AT UNIVERSITY OF GÖTTINGEN

According to the weekly *Bulletin* (Feb. 18, 1958) of the Press and Information Office, German Federal Republic (Bonn), the University of Göttingen is the first university in West Germany to introduce television as an aid to instruction. "A large auditorium used by the students of chemistry has been equipped with a television camera which, rolling noiselessly along the laboratory table, transmits the process of experimentation to four television screens set up in the auditorium in such a way that no student is more than 25 ft. away from a screen."

UNIVERSITY OF CHICAGO BUSINESS SCHOOL EXPANDING TEACHING AND RESEARCH

The University of Chicago has been granted $1,375,000 by the Ford Foundation for support of the expanded program of teaching and research of the School of Business. Two endowed professorships of $500,000 each are provided in the grant. Another $250,000 will provide, at an average of $50,000 a year over a five-year period, fellowships for Ph.D. students. The remaining $125,000 is for support of faculty research over the next five years. One of the two endowed professorships will be held by a director of research for the school. The other is a rotating professorship in teaching or research which may be held by either members of the school or visiting professors. No individual may hold the professorship more than two years in 10. "This grant, the largest ever received by the School of Business," said Dean W. Allen Wallis, "moves us appreciably toward the realization of our ambitious ten year plan for the development of the School."

A BALANCED HIGHER EDUCATION

In his remarks at the University of California's 90th Charter Day exercises, Berkeley campus, March 20, Pres. Robert G. Sproul included the following statement: "A world without both the sciences and the arts, each of them liberal in essence, would be an unbalanced and a dangerous world. Essential to the personal safety and mental health of mankind, even in an age of moons and missiles, is the spiritual and cultural heritage of ages past. As Woodrow Wilson once said, 'Let one part of the body outgrow the rest and you have malignant disease, the threat of death. The growth that is a manifestation of life is equable, draws its springs gently out of the old fountains of strength, builds upon old tissue. Colleges ought surely to be the best nurseries of such life, the best schools of the progress that conserves.' The University of California has been such a nursery in the past and, I hope and believe, will continue to be so in the future. For, as the great French scholar and writer, Alexis (Charles Henri Clerel) de Tocqueville, said a century ago, 'It is dangerous to school men only to make *things* great. What we need to do is to make great *men*.'"

A man needs only one reason...

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AMERICAN CANCER SOCIETY

SINCERE HIGH-SCHOOL SENIOR WANTED

Sincerity on the part of today's high-school seniors is encouraged by this ad in the *New York Herald Tribune* (March 26): "WANTED . . . sincere and deserving high school senior who has high scholastic and moral standing but cannot afford to go to college. Send all biographical details and tell about your ambitions. Possible opportunity awaits selected youngster. Reply to Box Number X329 Herald Tribune."

NEWS IN BRIEF . . .

Over $1,000,000 in scholarship aid is now being shared by nearly 60% of the undergraduates of Columbia College. According to Assistant Dean Henry Coleman, 1,435 of the currently enrolled 2,414 Columbia men are receiving a total of $1,023,349 in scholarships—more than

in any previous year. Last year's total was set at $995,200 . . . **An Institute for Community Development** at Michigan State University has been made possible with a $756,950 grant from the W. K. Kellogg Foundation. The institute will help to meet the growing demands upon the university from communities for assistance. "This specific project to help communities help themselves," explained D. B. Varner, vice-president for off-campus education, "could well become one of the more significant developments in the history of Michigan State."

Ways for improving high-school education will be planned at a workshop in secondary education at the University of Chicago, July 7-25. The workshop, an outgrowth of the National Conference on the American High School held last Oct. at the university, will explore major aspects of the American secondary school developed by the conference. Director of the workshop will be Francis S. Chase, chairman, university's department of education . . . **Although school consolidations continue** across the nation, it has been estimated that one-third of all high-school youth are still enrolled in small schools. Studies indicate that loss of talent through inadequate development and motivation is particularly critical in small rural schools. The special problems of improving instruction in these small high schools will be the focus of a new course to be offered this summer at Teachers College, Columbia University.

'58 For Young New Yorkers, a new monthly magazine, is designed to expose young people to the arts and sciences and to give them an adult interpretation of current affairs in terms which will be meaningful and stimulating to them. Distributed free to more than 100,000 school children throughout the nation, the magazine is published by Mrs. Anne Tobias, daughter of the late Walter Ansel Strong, former publisher of the *Chicago Daily News*, under the banner of Strong Publications, Inc., New York City . . . **"Parents, Children, and Books,"** a workshop to be sponsored by the University of Washington (Seattle) School of Librarianship and the National Book Committee in co-operation with the College of Education, July 7-11, will investigate how the co-operative influence of home, school, and library can help children of all ages to increase their enjoyment of books and reading. This is the first time that such a national workshop will include parents as participants.

NEW POSTS AND APPOINTMENTS . . .

New members of the Educational Policies Commission: B. L. Dodds, dean, College of Education, University of Illinois; John Fischer, superintendent of schools, Baltimore, Md.; and Henry I. Willett, superintendent of schools, Richmond, Va. Virgil M. Hancher, president, State University of Iowa, appointed new chairman of the EPC . . . **Edmund J. Gleazer, Jr.,** succeeds Jesse P. Bogue as executive director, American Association of Junior Colleges. Dr. Bogue will continue to serve the association as consultant until Aug. 1, 1959 . . . **Wilfred Bloomberg,** associate director for mental health, Southern Regional Education Board, Atlanta, Ga., has accepted the post of commissioner of mental health, State of Connecticut . . . **Harold P. Fawcett** of Ohio State University elected president, National Council of Teachers of Mathematics.

The Very Rev. Robert J. Slavin, O.P., president, Providence (R.I.) College, named president, college and university department, National Catholic Educational Association . . . **George L. Hall** will resign as director of development, Educational Television and Radio Center, Ann Arbor, Mich., effective June 30, to become head of Casper (Wyo.) College . . . **Ernest C. Arbuckle,** executive vice-president of Foster and Kleiser, outdoor advertising division of W. R. Grace & Co., will assume duties as dean, Graduate School of Business, Stanford University, July 1 . . . **Nathan E. Cohen,** associate dean, School of Social Work, Columbia University will succeed Margaret Johnson, July 1, as dean, School of Applied Social Sciences, Western Reserve University (Cleveland, Ohio). Dean Johnson will retire.

Kenneth G. Ryder, associate professor of history, Northeastern University (Boston), appointed dean of administration, Day Colleges, effective July 1 . . . **Mario J. Goglia,** Regents' Professor of Mechanical Engineering, Georgia Institute of Technology (Atlanta), named dean, College of Engineering, University of Notre Dame, effective July 1 . . . **Patricia Ann Brauel,** assistant dean of students, University of California (Berkeley), appointed dean of students, Mills College (Oakland, Calif), effective July 1 . . . **Willard S. Elsbree,** professor of education, will succeed John K. Norton as director, Division of Administration and Guidance, Teachers College, Columbia University, effective July 1 when Prof. Norton reaches the mandatory retirement age of 65. Other appointments and promotions: Mozell C. Hill, professor of education; to professorships, Manson Van B. Jennings (history), Anne S. McKillop (education), Mildred L. Fairchild (fine arts), and Frances R. Kreuter, Lutie C. Leavell, and Mildred L. Montag (nursing education); to associate professorships, Gerald Dykstra (linguistics and Spanish), M. Frances Frazier and Louise C. Smith (nursing education), and Esther M. McCabe, Matthew B. Miles and Rosalea A. Schonbar (education); Franklin E. Moak and Hally B. W. Poindexter, assistant professors of education and of health and physical education, respectively.

Frederick L. Gwynn, associate professor of English, University of Virginia, appointed professor of English, Trinity College (Hartford, Conn.). He also will assume duties as chairman of the department . . . **S. Norman Feingold,** executive director, Jewish Vocational Service, Inc., Boston, will resign July 1 to become national director, B'nai B'rith Vocational Service, Washington, D. C. headquarters . . . **Bernard J. Kohlbrenner,** professor of education, University of Notre Dame, named consulting editor, Catholic Series in Education, McGraw-Hill Book Co. . . . **Promotions at Adelphi College** (Garden City, N. Y.): William L. Curry and Richard Bodtke to associate professorships of English; to assistant professorships, Donald I. Hammer (mathematics), Warren P. Jennerjahn (art), and Sherman Tatz (psychology).

RECENT PUBLICATIONS

(Continued from page 243)

HALL, OLIVE A. *Home Economics Careers and Homemaking.* Pp. 301. John Wiley & Sons. New York 16. $4.25.

Handbook on International Study: A Guide for Foreign Students on Study in the United States and for U. S. Students on Study Abroad. Second edition. Pp. 450. Institute of International Education, New York 21. $3.00.

HARLAN, LOUIS R. *Separate and Unequal.* Pp. 290. University of North Carolina Press, Chapel Hill, N. C. $6.00.

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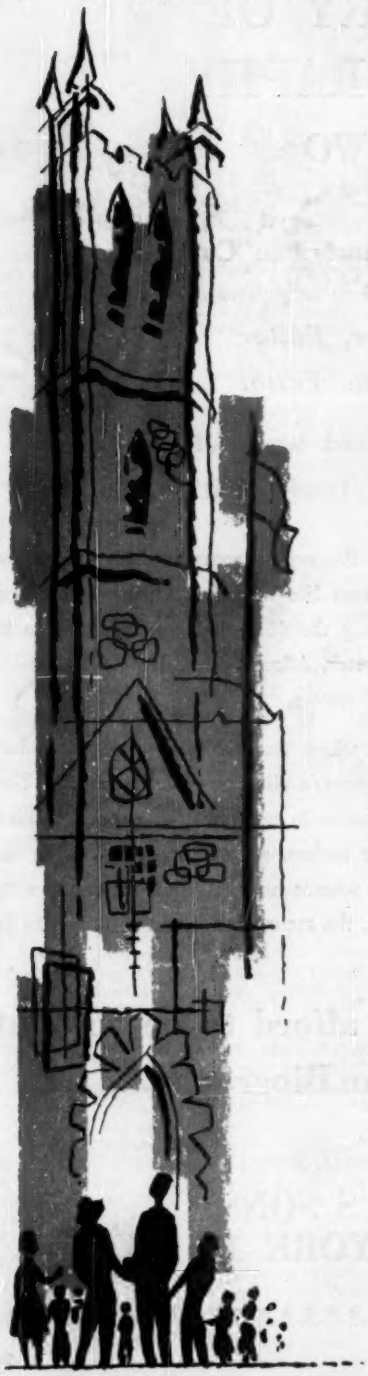

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